

SN: 09/759,759

a₂ 1. (Amend d) Seed of maize inbred line designated PH77V, representative seed of said line having been deposited under ATCC Accession No. PTA-4534.

a₃ 3. (Amended) The maize plant of claim 2, wherein said plant is detasseled.

4. (Amended) A tissue culture of regenerable cells or protoplasts from the plant of claim 2.

a₄ 6. (Amended) A maize plant regenerated from the tissue culture of claim 4, capable of expressing all the morphological and physiological characteristics of inbred line PH77V, representative seed of which have been deposited under ATCC Accession No. PTA-4534.

a₅ 8. (Amended) The method of claim 7 wherein the plant of inbred maize line PH77V is the female or male parent.

a₆ 11. (Amended) The maize plant, or parts thereof, of claim 2, wherein the plant or parts thereof have been transformed so that its genetic material contains one or more transgenes that confer a qualitative trait.

12. (Amended) A method for producing a first generation (F1) maize plant comprising crossing the maize plant of claim 11 with a second plant.

13. (Amended) The first generation (F1) maize plant, or parts thereof, produced by the method of claim 12.

14. (Amended) A maize plant, or parts thereof, wherein at least one ancestor of said maize plant is the maize plant of claim 2, said maize plant expressing a combination of at least two PH77V traits which are not significantly different from PH77V traits when determined at a 5% significance level and when grown in the same environmental conditions, said PH77V traits selected from the group

SN: 09/759,759

Ac
cont

consisting of: a relative maturity of 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain, grain yield, early growth, flowering time, female characteristics, male characteristics, and stalk lodging resistance.

15. (Amended) A method for developing a PH77V-progeny maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material, comprising: obtaining the maize plant, or its parts, of claim 2 as a source of said breeding material.

16. (Amended) The method of claim 15 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

17. (Amended) The PH77V-progeny maize plant, or parts thereof, produced by the method of claim 15 wherein the method comprises 2 or less crosses to a plant other than PH77V or a plant that has PH77V as a parent.

18. (Amended) The maize plant, or parts thereof, of claim 2, further comprising one or more genes that confer a qualitative trait and have been transferred into said maize plant through breeding methods that utilize PH77V as a recurrent parent.

19. (Amended) The maize plant of claim 18, wherein at least one of the genes is a dominant allele.

20. (Amended) The maize plant of claim 18, wherein at least one of the genes is a recessive allele.

SN: 09/759,759

21. (Amended) A maize plant, or parts thereof, having all the physiological and morphological characteristics of inbred line PH77V, representative seed of said line having been deposited under ATCC accession No. PTA-4534.

96
cont

22. (Amended) The maize plant of claim 2, wherein genes controlling male sterility have been transferred into said maize plant through crossing, wherein PH77V is a recurrent parent, and wherein said plant has essentially the same morphology and physiology of inbred maize line PH77V other than the trait of male sterility.

23. (Amended) A tissue culture of regenerable cells or protoplasts from the plant of claim 21.

25. (Amended) A maize plant regenerated from the tissue culture of claim 23, capable of expressing all the morphological and physiological characteristics of inbred line PH77V, representative seed of which have been deposited under ATCC Accession No. PTA-4534.

97

27. (Amended) The method of claim 26 wherein the inbred maize plant having all the morphological and physiological characteristics of inbred maize plant PH77V is the female or male parent.

98

33. (Amended) A PH77V-progeny maize plant, or parts thereof, wherein at least one ancestor of said PH77V-progeny maize plant is the maize plant of claim 2, and wherein the pedigree of said PH77V-progeny maize plant is within 2 or less crosses to a plant other than PH77V or a plant that has PH77V as a parent.

99

34. (Amended) A method for developing a PH77V-progeny maize plant in a maize plant breeding program using plant breeding techniques, which include employing a maize plant, or its parts, as a source of plant breeding material,

SN: 09/759,759

comprising: obtaining the maize plant, or its parts, of claim 21 as a source of said breeding material.

A9
cont.

35. (Amended) The method of claim 34 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

36. (Amended) The PH77V-progeny maize plant, or parts thereof, produced by the method of claim 34 wherein the method comprises 2 or less crosses to a plant other than PH77V or a plant that has PH77V as a parent.

37. (Amended) A process for producing inbred PH77V, representative seed of which have been deposited under ATCC Accession No. PTA-4534, comprising:

- (a) planting a collection of seed comprising seed of a hybrid, one of whose parents is inbred PH77V said collection also comprising seed of said inbred;
- (b) growing plants from said collection of seed;
- (c) identifying said inbred PH77V plants;
- (d) selecting said inbred PH77V plant; and
- (e) controlling pollination in a manner which preserves the homozygosity of said inbred PH77V plant.

40. (Amended) A method for producing a first generation (F1) PH77V-progeny maize plant, comprising:

A10

- (a) crossing inbred maize line PH77V, representative seed of said line having been deposited under ATCC Accession No. PTA-4534, with a second maize plant to yield progeny maize seed;
- (b) growing said progeny maize seed, under plant growth conditions, to yield said first generation (F1) PH77V-progeny maize plant.

SN: 09/759,759

41. (Amended) A first generation (F1) PH77V-progeny maize plant, or parts thereof, produced by the method of claim 40.

42. (Amended) A method for producing a PH77V progeny inbred maize plant, comprising generating the first generation (F1) PH77V-progeny maize plant by the method of claim 40 and further comprising: selfing said first generation (F1) PH77V-progeny maize plant for successive filial generations to generate a PH77V inbred progeny maize plant.

43. (Amended) The PH77V inbred progeny maize plant, or parts thereof, produced by the method of claim 42.

47. (Amended) The maize plant, or parts thereof, of claim 2, further comprising one or more genes that have been transferred into said maize plant by utilizing PH77V as a recurrent parent and wherein the maize plant, or parts thereof, are essentially unchanged from inbred maize line PH77V.

48. (Amended) The maize plant of claim 47, wherein at least one gene is a dominant allele.

49. (Amended) The maize plant of claim 47, wherein at least one gene is a recessive allele.

50. (New) The maize plant of claim 2 further comprising a gene wherein said gene confers a trait selected from the group consisting of herbicide resistance, insect resistance, disease resistance, white grain, and waxy grain.

51. (New) The method of developing an inbred PH77V maize plant conferring a backcrossed trait comprising crossing the maize plant of claim 2 to a second maize plant and utilizing PH77V as the recurrent parent.

SN: 09/759,759

Ar 52. (New) The inbred PH77V maize plant conferring a backcrossed trait of claim 51, wherein said inbred PH77V maize plant conferring a backcrossed trait has essentially the same traits as inbred PH77V except for the backcrossed trait and wherein the backcrossed in trait is selected from a group consisting of herbicide resistance, insect resistance, disease resistance, white grain and waxy grain.

53. (New) The method of crossing the inbred PH77V maize plant conferring a backcrossed trait of claim 52 with a second maize plant to develop a first generation (F1) maize plant.
